

FIG. 1B

ATG AAA TAC CTA TTG CCT ACG GCA GCC GCT GGA TTG TTA TTA CTC
MET Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu

GCT GCC CAA CCA GCG ATG GCC CAG GTG CAG CTG GTG CAG AGC GGT
Ala Ala Gln Pro Ala MET Ala Gln Val Gln Leu **Val** Gln Ser Gly

AGC GAA CTG AAA AAA CCG GGT GCG AGC GTT AAG ATC AGC TGC AAA
Ser Glu Leu Lys Lys Pro Gly **Ala Ser** Val Lys Ile Ser Cys Lys

CDR1

GCG AGC GGT TAT ACC TTC ACC GAT TAC GGT ATG AAC TGG GTT AAA
 Ala Ser Gly Tyr Thr Phe Thr Asp Tyr Gly MET Asn Trp Val Lys

CAG GCG CCG GGT CAA GGT CTG AAA TGG ATG GGT TGG ATC AAC ACC
 Gln Ala Pro Gly Gln Gly Leu Lys Trp MET Gly Trp Ile Asn Thr

CDR2

TAC ACC GGT GAA AGC ACC TAC GTT GAC GAT TTC AAA GGT CGT TTC
Tyr Thr Gly Glu Ser Thr Tyr Val Asp Asp Phe Lys Gly Arg Phe

GTT TTC AGC CTG GAT ACC AGC GTT AGC GCG GCC TAC CTG CAG ATC
 Val Phe Ser Leu **Asp** Thr Ser **Val** Ser Ala Ala Tyr Leu Gln Ile

AGC TCT CTG AAA GCG GAA GAC ACC GCG ACC TAC TTC TGC GCG CGT
Ser Ser Leu Lys **Ala** Glu Asp Thr Ala Thr Tyr Phe Cys Ala Arg

CDR3

CGC GGT TTC TAC GCG ATG GAT TAC TGG GGC CAA GGG ACC ACG GTC
Arg Gly Phe Tyr Ala MET Asp Tyr Trp Gly Gln Gly Thr Thr Val

Linker

ACC GTC TCC TCA GGT GGA GGC GGT TCA GGC GGA GGT GGC TCT GGC
 Thr Val Ser Ser **Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly**
 GGT GGC GGA TCG GAC ATC GTA CTG ACC CAG AGC CCG GCG ACC ATG
Gly Gly Gly Ser Asp Ile **Val** Leu Thr Gln Ser Pro Ala **Thr** MET

AGC GCG AGC CCG GGT GAA CGT GTT ACC CTG ACC TGC AGC GCG AGC
 Ser Ala Ser Pro Gly Glu **Arg** Val Thr Leu Thr Cys Ser Ala Ser

FIG. 2A

CDR1

TCT AGC ATC AGC TAT ATG TTC TGG TAT CAT CAG CGT CCG GGT CAG
Ser Ser Ile Ser Tyr MET Phe Trp Tyr His Gln Arg Pro Gly **Gln**

CDR2

AGC CCG CGT CTG TTG ATC TAT GAT ACC AGC AAC CTG GCG AGC GGT
Ser Pro Arg Leu Leu Ile Tyr Asp Thr Ser Asn Leu Ala Ser Gly

GTT CCG GCG CGT TTC AGC GGT AGC GGT AGC GGT ACC AGC TAT AGC
Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser

CTG ACC ATC AGC CGT ATG GAA CCG GAA GAT TTC GCG ACC TAT TTC
Leu Thr Ile Ser Arg MET Glu Pro Glu Asp Phe Ala Thr Tyr Phe

CDR3

TGC CAT CAG AGC TCT AGC TAT CCG TTC ACC TTC GGT CAG GGT ACC
Cys His Gln Ser Ser Ser Tyr Pro Phe Thr Phe Gly **Gln** Gly Thr

His6-Tag

AAA CTC GAG ATC AAA CGG CAC CAT CAC CAT CAC CAC TAA
Lys Leu Glu Ile Lys Arg **His His His His His His** ---

FIG. 2B

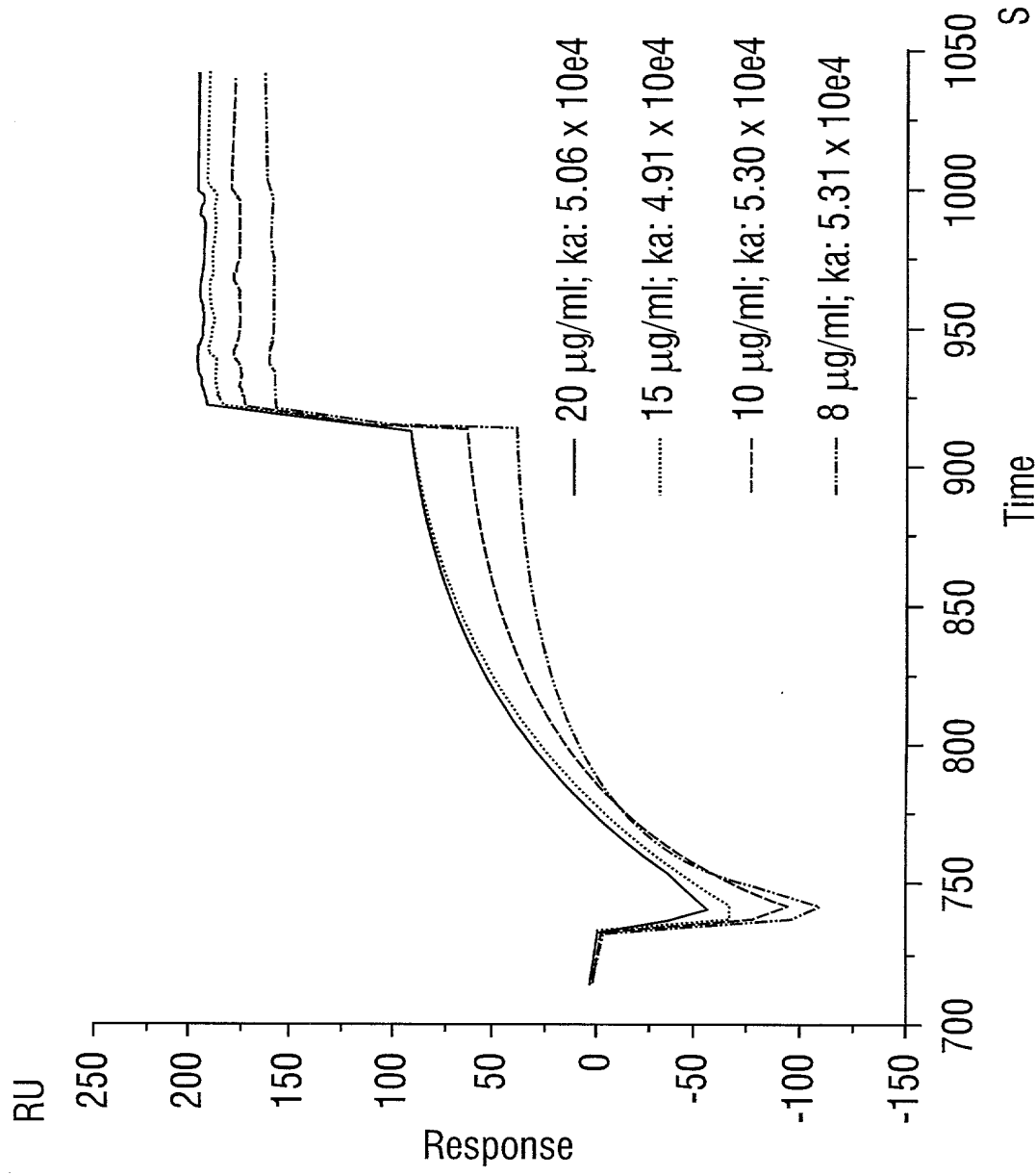


FIG. 3

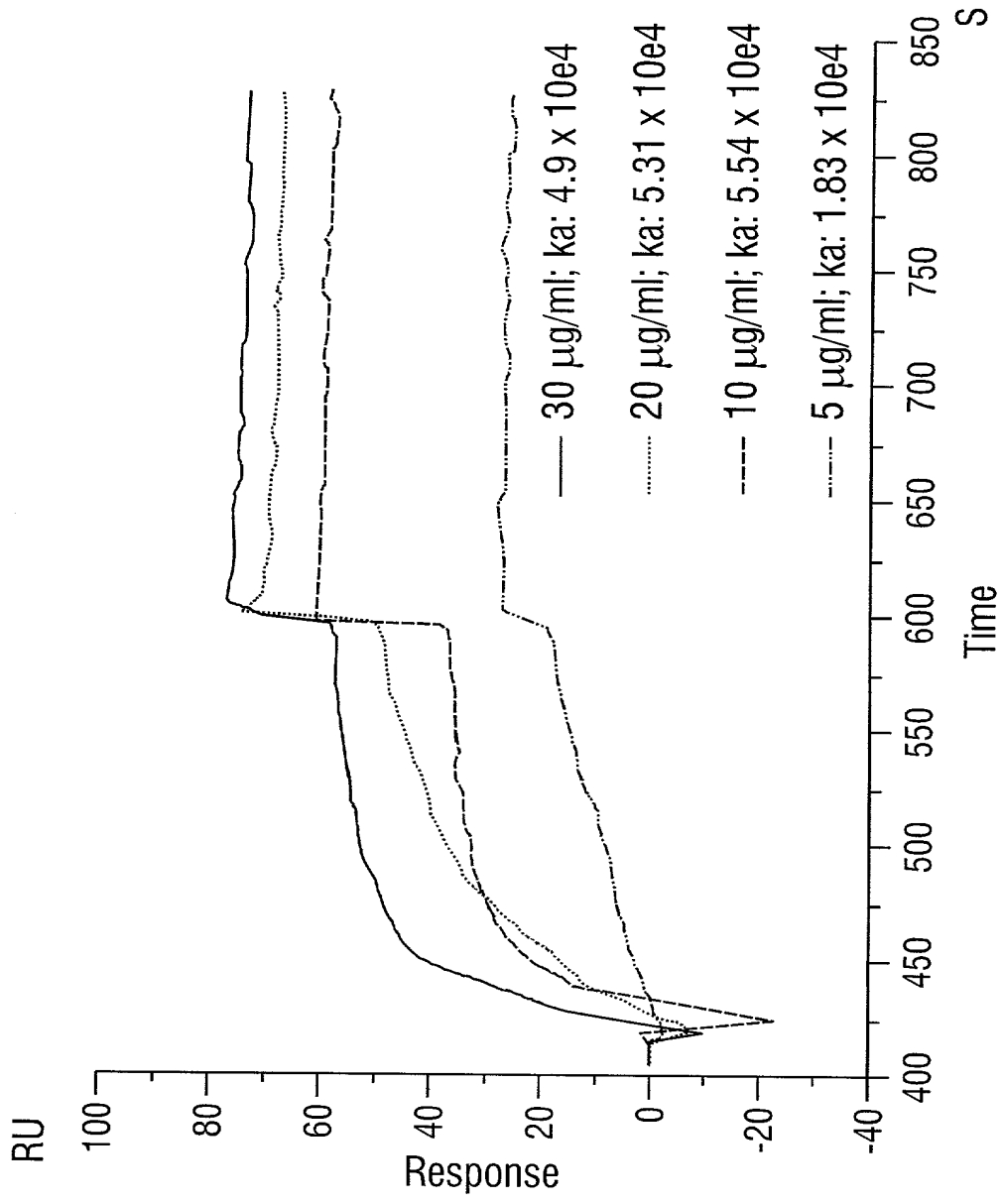


FIG. 4

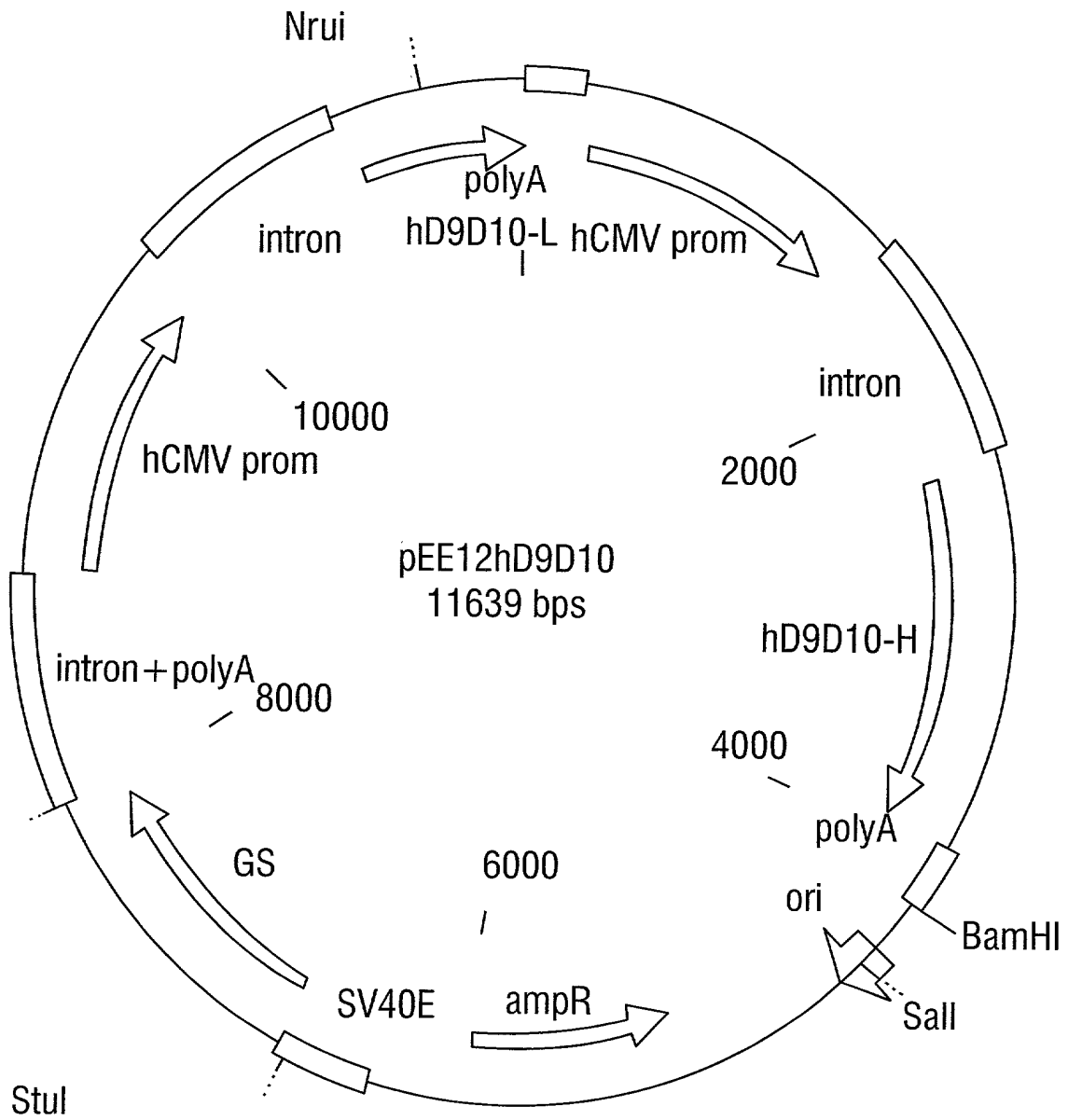


FIG. 5

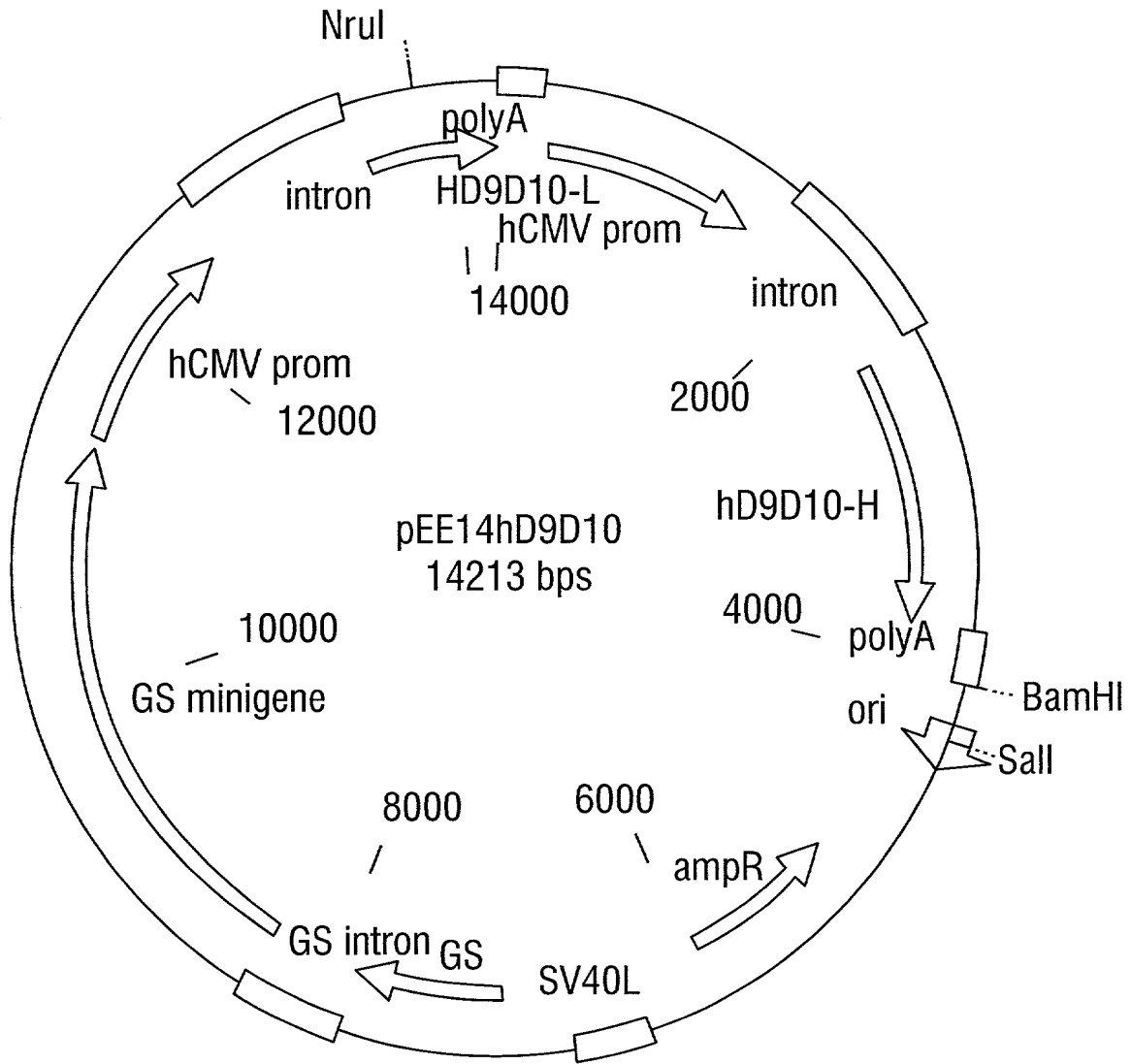


FIG. 6

1 ATGGATTTTCAAGTGCAGATTTTCAGCTTCCTGCTAATCA
 41 GTGCCTCAGTCATACTCTCGCAGGTGCAGCTGGTGCAGAG
 81 CGGTAGCGAACTGAAAAAACCGGGTGCAGAGCGTTAAGATC
 121 AGCTGCAAAGCGAGCGGTTATACCTTCACCGATTACGGTA
 161 TGAAC TGGGT TAAACAGGCGCCGGGTCAAGGTCTGAAATG
 201 GATGGGT TGGATCAACACCTACACCGGTGAAAGCACCTAC
 241 GTTGACGATTTCAAAGGTTCGTTTTCGTTTTTCAGCCTGGATA
 281 CCAGCGTTAGCGCGGCCTACCTGCAGATCAGCTCTCTGAA
 321 AGCGGAAGACACCGCGACCTACTTCTGCGCGCGTTCGCGGT
 361 TTCTACGCGATGGATTACTGGGGCCAAGGGACCACGGTCA
 401 CCGTCTCGAGCGCATCCACCAAGGGCCCATCGGTCTTCCC
 441 CCTGGCACCCCTCCTCCAAGAGCACCTCTGGGGGCACAGCG
 481 GCCCTGGGCTGCCTGGTCAAGGACTACTTCCCCGAACCGG
 521 TGACGGTGTTCGTGGAAC TCAAGGCGCCCTGACCAGCGGCGT
 561 GCACACCTTCCCGGCTGTCCTACAGTCCTCAGGACTCTAC
 601 TCCCTCAGCAGCGTGGTGACCGTGCCCTCCAGCAGCTTGG
 641 GCACCCAGACCTACATCTGCAACGTGAATCACAAGCCCAG
 681 CAACACCAAGGTGGACAAGAGAGTTGAGCCCAAATCTTGT
 721 GACAAAAC TCAACATGCCACCGTGCCAGCACCTGAAC
 761 TCCTGGGGGGACCGTCAGTCTTCCTCTTCCCCCCCCAAAACC
 801 CAAGGACACCCTCATGATCTCCCGGACCCCTGAGGTCACA
 841 TGCGTGGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCA
 881 AGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGC
 921 CAAGACAAAGCCGCGGGAGGAGCAGTACAACAGCACGTAC
 961 CGTGTGGTCAGCGTCCTCACCGTCCTGCACCAGGACTGGC
 1001 TGAATGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGC
 1041 CCTCCCAGCCTCCATCGAGAAAACCATCTCCAAAGCCAAA
 1081 GGGCAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCAT
 1121 CCCGGGAGGAGATGACCAAGAACCAGGT CAGCCTGACCTG
 1161 CCTGGTCAAAGGCTTCTATCCCAGCGACATCGCCGTGGAG
 1201 TGGGAGAGCAATGGGCAGCCGGAGAACAAC TACAAGACCA
 1241 CGCCTCCCGTGCTGGACTCCGACGGCTCCTTCTTCCTCTA
 1281 TAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCAGGGG
 1321 AACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACA
 1361 ACCACTACACGCAGAAGAGCCTCTCCCTGTCTCCGGGTAA
 1401 GCTT

FIG. 7

1 ATGGATTTTCAAGTGCAGATTTTCAGCTTCCTGCTAATCA
41 GTGCCTCAGTCATACTCTCGGACATCGAGCTGACCCAGAG
81 CCCGGCGACCATGAGCGCGAGCCCGGGTGAACGTGTTACC
121 CTGACCTGCAGCGCGAGCTCTAGCATCAGCTATATGTTCT
161 GGTATCATCAGCGTCCGGGTGAGAGCCCGCGTCTGTTGAT
201 CTATGATACCAGCAACCTGGCGAGCGGTGTTCCGGCGCGT
241 TTCAGCGGTAGCGGTAGCGGTACCAGCTATAGCCTGACCA
281 TCAGCCGTATGGAACCGGAAGATTTTCGCGACCTATTTCTG
321 CCATCAGAGCTCTAGCTATCCGTTACCTTCGGTCAGGGT
361 ACCAAACTCGAGATCAAACGGACTGTGGCTGCACCATCTG
401 TCTTCATCTTCCCGCCATCTGATGAGCAGTTGAAATCTGG
441 AACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCC
481 AGAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCC
521 AATCGGGTAACTCCCAGGAGAGTGTACAGAGCAGGACAG
561 CAAGGACAGCACCTACAGCCTCAGCAGCACCTGACGCTG
601 AGCAAAGCAGACTACGAGAAACACAAAGTCTACGCCTGCG
641 AAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAAGAG
681 CTTCAACAGGGGAGAGTGC

FIG. 8

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	5	10	15	20																
1	M	D	F	Q	V	Q	I	F	S	F	L	L	I	S	A	S	V	I	L	S
21	Q	V	Q	L	V	Q	S	G	S	E	L	K	K	P	G	A	S	V	K	I
41	S	C	K	A	S	G	Y	T	F	T	D	Y	G	M	N	W	V	K	Q	A
61	P	G	Q	G	L	K	W	M	G	W	I	N	T	Y	T	G	E	S	T	Y
81	V	D	D	F	K	G	R	F	V	F	S	L	D	T	S	V	S	A	A	Y
101	L	Q	I	S	S	L	K	A	E	D	T	A	T	Y	F	C	A	R	R	G
121	F	Y	A	M	D	Y	W	G	Q	G	T	T	V	T	V	S	S	A	S	T
141	K	G	P	S	V	F	P	L	A	P	S	S	K	S	T	S	G	G	T	A
161	A	L	G	C	L	V	K	D	Y	F	P	E	P	V	T	V	S	W	N	S
181	G	A	L	T	S	G	V	H	T	F	P	A	V	L	Q	S	S	G	L	Y
201	S	L	S	S	V	V	T	V	P	S	S	S	L	G	T	Q	T	Y	I	C
221	N	V	N	H	K	P	S	N	T	K	V	D	K	R	V	E	P	K	S	C
241	D	K	T	H	T	C	P	P	C	P	A	P	E	L	L	G	G	P	S	V
261	F	L	F	P	P	K	P	K	D	T	L	M	I	S	R	T	P	E	V	T
281	C	V	V	V	D	V	S	H	E	D	P	E	V	K	F	N	W	Y	V	D
301	G	V	E	V	H	N	A	K	T	K	P	R	E	E	Q	Y	N	S	T	Y
321	R	V	V	S	V	L	T	V	L	H	Q	D	W	L	N	G	K	E	Y	K
341	C	K	V	S	N	K	A	L	P	A	S	I	E	K	T	I	S	K	A	K
361	G	Q	P	R	E	P	Q	V	Y	T	L	P	P	S	R	E	E	M	T	K
381	N	Q	V	S	L	T	C	L	V	K	G	F	Y	P	S	D	I	A	V	E
401	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S
421	D	G	S	F	F	L	Y	S	K	L	T	V	D	K	S	R	W	Q	Q	G
441	N	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S
461	L	S	L	S	P	G	K	L												

FIG. 9

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	5					10					15					20				
1	M	D	F	Q	V	Q	I	F	S	F	L	L	I	S	A	S	V	I	L	S
21	D	I	E	L	T	Q	S	P	A	T	M	S	A	S	P	G	E	R	V	T
41	L	T	C	S	A	S	S	S	I	S	Y	M	F	W	Y	H	Q	R	P	G
61	Q	S	P	R	L	L	I	Y	D	T	S	N	L	A	S	G	V	P	A	R
81	F	S	G	S	G	S	G	T	S	Y	S	L	T	I	S	R	M	E	P	E
101	D	F	A	T	Y	F	C	H	Q	S	S	S	Y	P	F	T	F	G	Q	G
121	T	K	L	E	I	K	R	T	V	A	A	P	S	V	F	I	F	P	P	S
141	D	E	Q	L	K	S	G	T	A	S	V	V	C	L	L	N	N	F	Y	P
161	R	E	A	K	V	Q	W	K	V	D	N	A	L	Q	S	G	N	S	Q	E
181	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L
201	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L
221	S	S	P	V	T	K	S	F	N	R	G	E	C							

FIG. 10

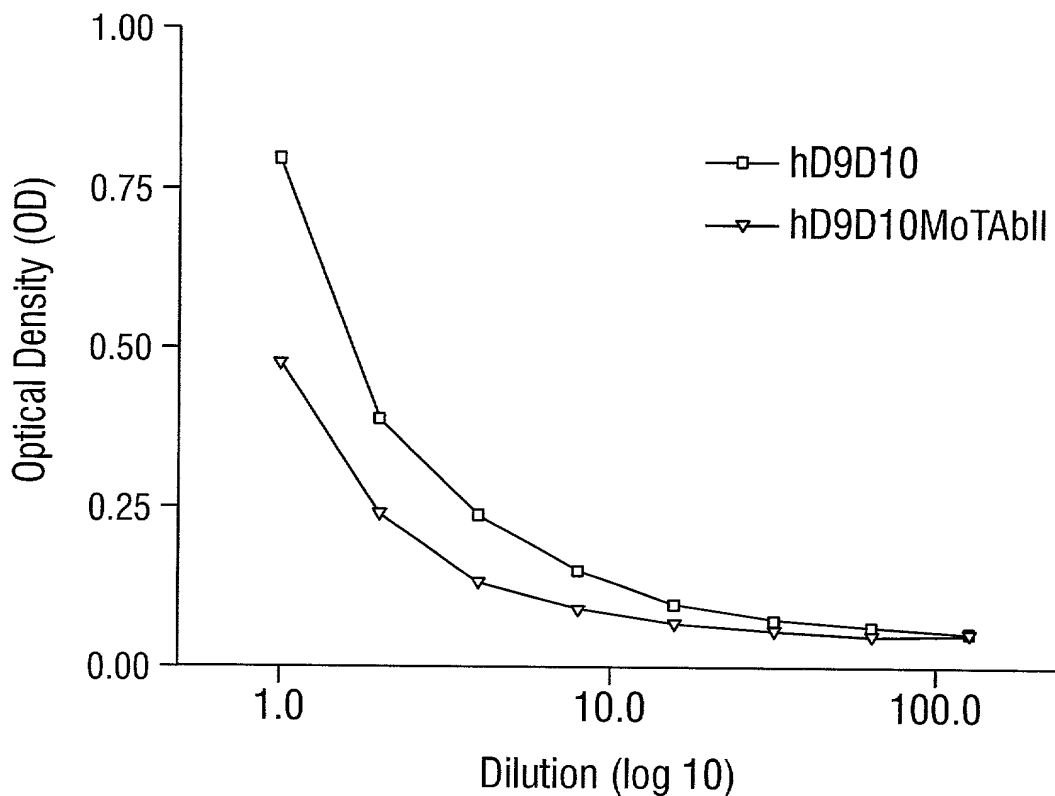


FIG. 11

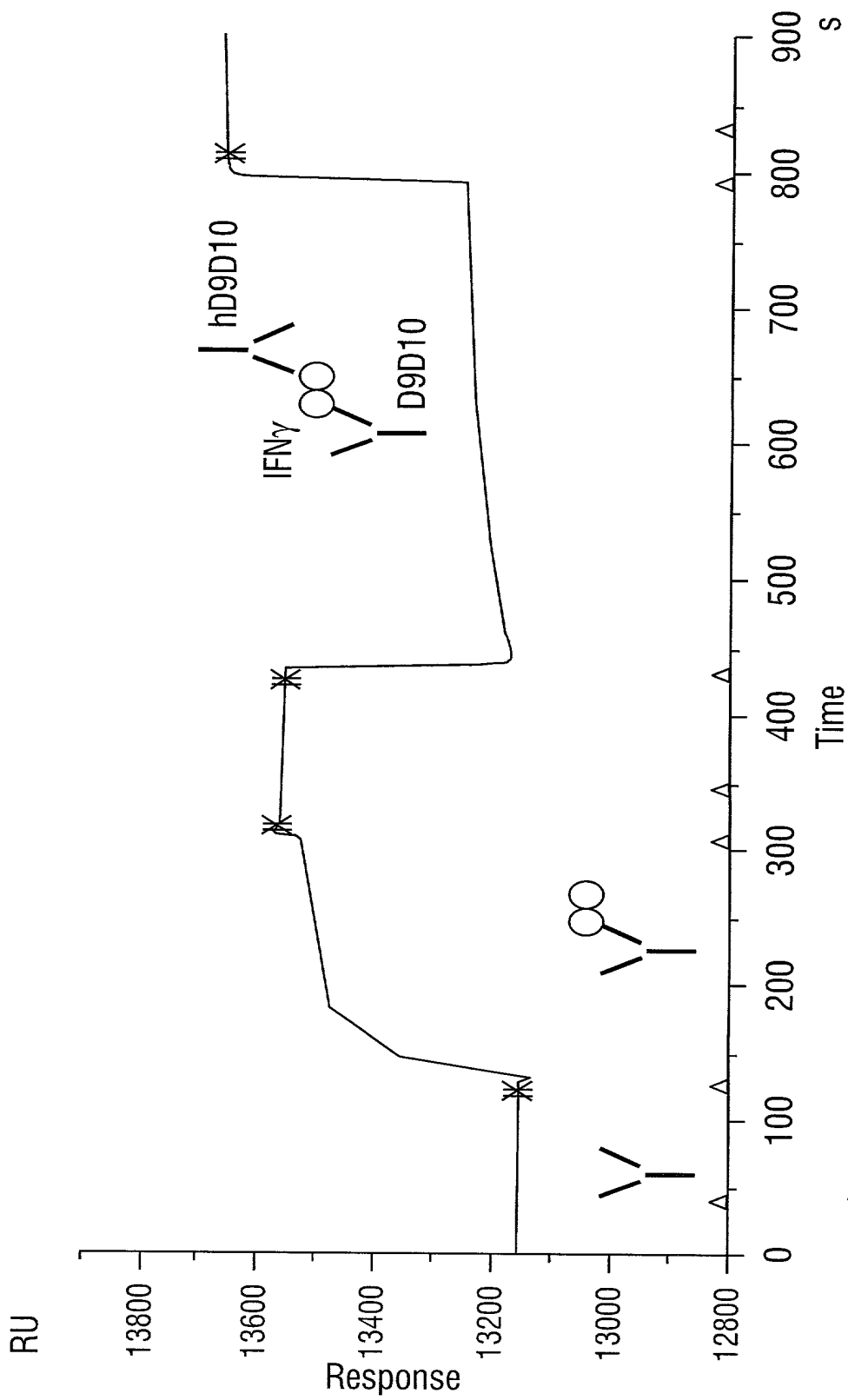


FIG. 12

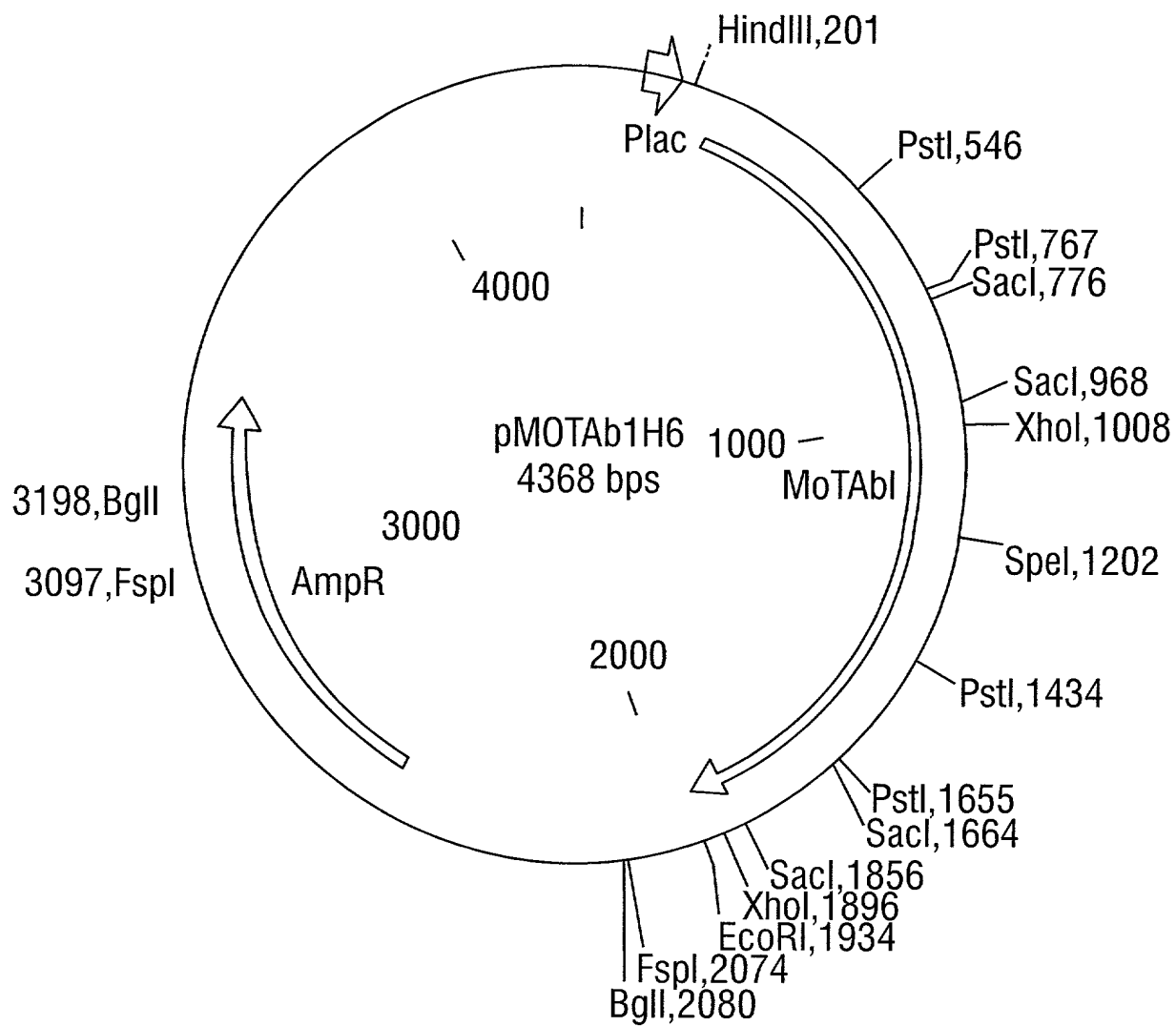


FIG. 14

1 CAGGTGCAGCTGGTGCAGAGCGGTAGCGAACTGAAAAAACCGGGTGCGAG
 51 CGTTAAGATCAGCTGCAAAGCGAGCGGTTATACCTTCACCGATTACGGTA
 101 TGAAC TGGGTAAACAGGCGCCGGGTCAAGGTCTGAAATGGATGGGTTGG
 151 ATCAACACCTACACCGGTGAAAGCACCTACGTTGACGATTTCAAAGGTCTG
 201 TTTCGTTTTTCAGCCTGGATACCAGCGTTAGCGCGGCCTACCTGCAGATCA
 251 GCTCTCTGAAAGCGGAAGACACCGCGACCTACTTCTGCGCGCGTCTGCGGT
 301 TTCTACGCGATGGATTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
 351 AGGTGGAGGCGGTTT CAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACA
 401 TCGTACTGACCCAGAGCCCGGCGACCATGAGCGCGAGCCCGGGTGAACGT
 451 GTTACCCTGACCTGCAGCGCGAGCTCTAGCATCAGCTATATGTTCTGGTA
 501 TCATCAGCGTCCGGGTCAGAGCCCGCGTCTGTTGATCTATGATAACCAGCA
 551 ACCTGGCGAGCGGTGTTCCGGCGCGTTCAGCGGTAGCGGTAGCGGTACC
 601 AGCTATAGCCTGACCATCAGCCGTATGGAACCGGAAGATTTTCGCGACCTA
 651 TTTCTGCCATCAGAGCTCTAGCTATCCGTTACCTTCGGTCAGGGTACCA
 701 AACTCGAGATCAAACGGAACCCGCTGGGTGATAACCACTCATACTCCGGA
 751 GGTGAACTGGAAGAGCTGTTGAAACATCTGAAAGAACTGCTGAAAGGTCC
 801 GCGGAAAGGTGAACTGGAGGAATTGCTGAAGCACCTGAAAGAGCTGTTGA
 851 AAGGTACCCCCCTGGGTGATACTACCCATAACCAGCGGTGAGGTGCAACTA
 901 GTGCAGAGCGGTAGCGAACTGAAAAAACCGGGTGCGAGCGTTAAGATCAG
 951 CTGCAAAGCGAGCGGTTATACCTTCACCGATTACGGTATGAACTGGGTTA
 1001 AACAGGCGCCGGGTCAAGGTCTGAAATGGATGGGTTGGATCAACACCTAC
 1051 ACCGGTGAAAGCACCTACGTTGACGATTTCAAAGGTCGTTTCGTTTTTCAG
 1101 CCTGGATAACCAGCGTTAGCGCGGCCTACCTGCAGATCAGCTCTCTGAAAG
 1151 CGGAAGACACCGCGACCTACTTCTGCGCGCGTCTGCGGTTTCTACGCGATG
 1201 GATTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCGG
 1251 TTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATCGTACTGACCC
 1301 AGAGCCCGGCGACCATGAGCGCGAGCCCGGGTGAACGTGTTACCCTGACC
 1351 TGCAGCGCGAGCTCTAGCATCAGCTATATGTTCTGGTATCATCAGCGTCC
 1401 GGGTCAGAGCCCGCGTCTGTTGATCTATGATAACCAGCAACCTGGCGAGCG
 1451 GTGTTCCGGCGCGTTCAGCGGTAGCGGTAGCGGTACCAGCTATAGCCTG
 1501 ACCATCAGCCGTATGGAACCGGAAGATTTTCGCGACCTATTTCTGCCATCA
 1551 GAGCTCTAGCTATCCGTTACCTTCGGTCAGGGTACCAAACCTCGAGATCA
 1601 AACGGCACCATCACCATCACCCTAA

FIG. 15

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1 QVQLVQSGSELKKPGASVKISCKASGYTFTDYGMNWVKQAPGQGLKWMGW
 51 INTYTGESTYVDDFKGRFVFSLDTSVSAAYLQISSLKAEDTATYFCARRG
 101 FYAMDYWGQGTTVTVSSGGGGSGGGGSGGGGSDIVLTQSPATMSASPGER
 151 VTLTCSASSSISYMFYHQRPGQSPRLLIYDTSNLA SGVPARFSGSGSGT
 201 SYSLTISRMEPEDFATYFCHQSSSYPTFTFGQGTKLEIKRTPPLGDTTHTSG
 251 GELEELLKHLKELLKGPRKGELEELLKHLKELLKGTPLGDTTHTSGQVQL
 301 VQSGSELKKPGASVKISCKASGYTFTDYGMNWVKQAPGQGLKWMGWINTY
 351 TGESTYVDDFKGRFVFSLDTSVSAAYLQISSLKAEDTATYFCARRGFYAM
 401 DYWGQGTTVTVSSGGGGSGGGGSGGGGSDIVLTQSPATMSASPGERVTLT
 451 CSASSSISYMFYHQRPGQSPRLLIYDTSNLA SGVPARFSGSGSGTSYSL
 501 TISRMEPEDFATYFCHQSSSYPTFTFGQGTKLEIKRHHHHHH

FIG. 16

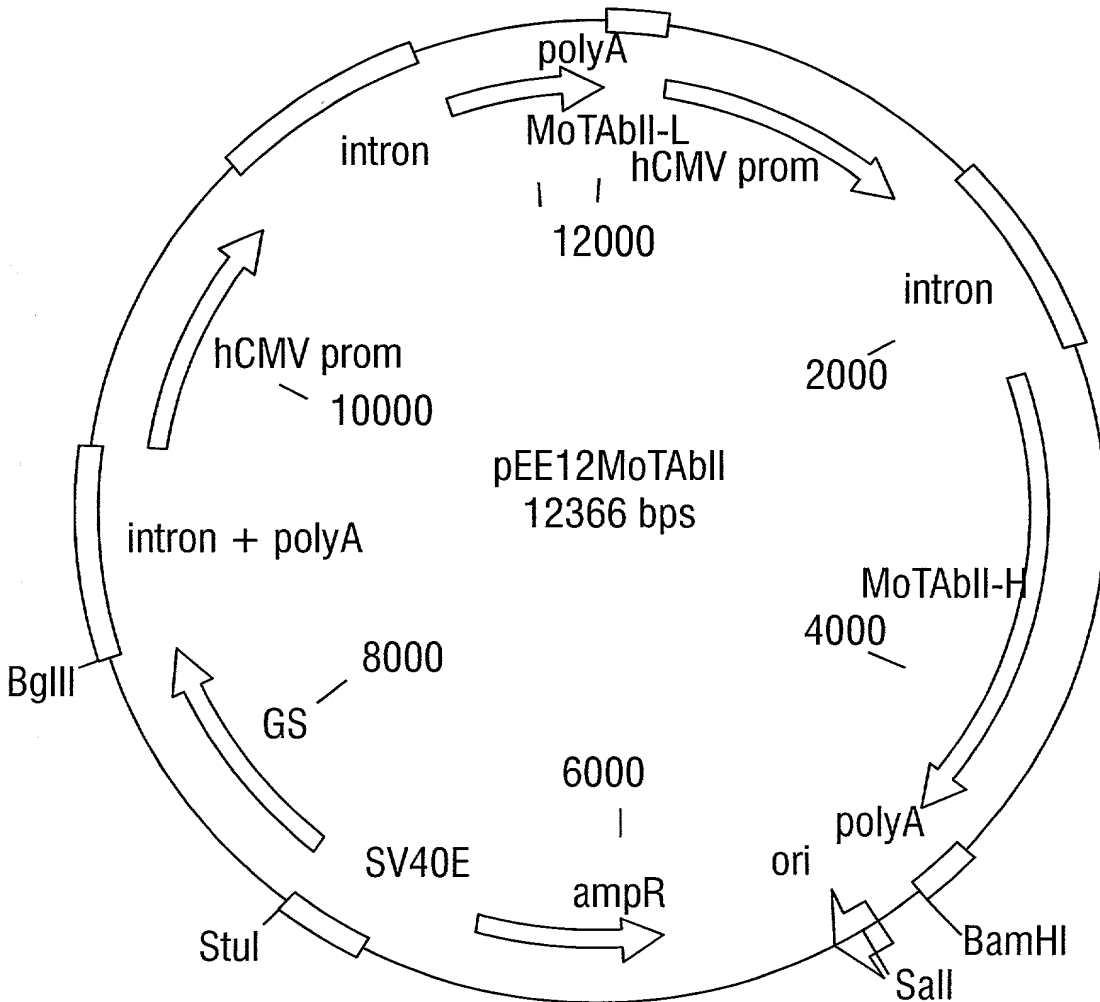


FIG. 17

20200205040000

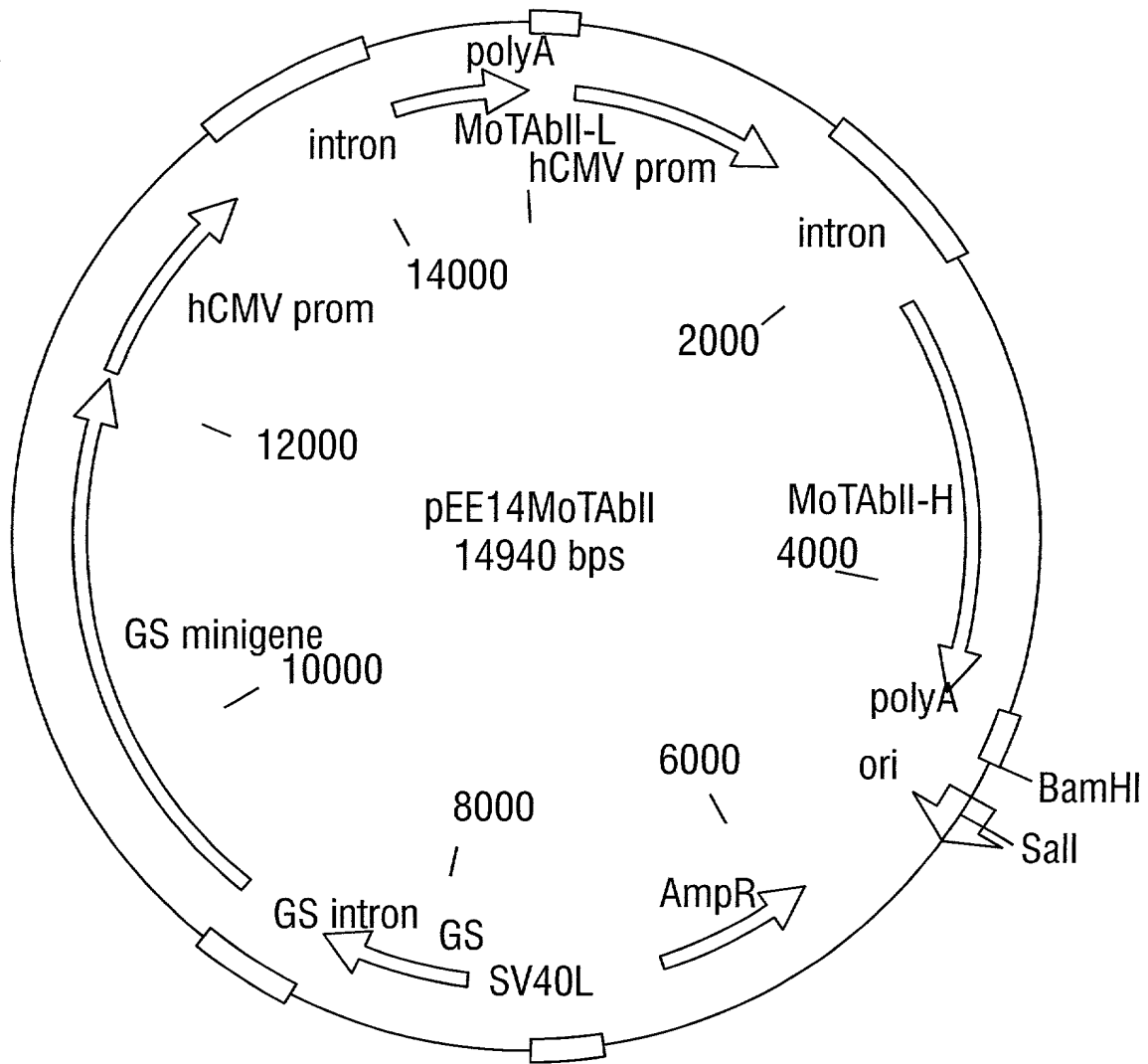


FIG. 18

1 ATGGATTTTCAAGTGCAGATTTTCAGCTTCCTGCTAATCA
 41 GTGCCTCAGTCATACTCTCGCAGGTGCAGCTGGTGCAGAG
 81 CGGTAGCGAACTGAAAAAACCGGGTGCGAGCGTTAAGATC
 121 AGCTGCAAAGCGAGCGGTTATACCTTCACCGATTACGGTA
 161 TGAAGTGGGTAAACAGGCGCCGGGTCAAGGTCTGAAATG
 201 GATGGGTTGGATCAACACCTACACCGGTGAAAGCACCTAC
 241 GTTGACGATTTCAAAGGTCGTTTCGTTTTTCAGCCTGGATA
 281 CCAGCGTTAGCGCGGCCTACCTGCAGATCAGCTCTCTGAA
 321 AGCGGAAGACACCGCGACCTACTTCTGCGCGCGTCGCGGT
 361 TTCTACGCGATGGATTACTGGGGCCAAGGGACCACGGTCA
 401 CCGTCTCGAGCGCATCCACCAAGGGCCCATCGGTCTTCCC
 441 CCTGGCACCCCTCCTCCAAGAGCACCTCTGGGGGCGACAGCG
 481 GCCCTGGGCTGCCTGGTCAAGGACTACTTCCCCGAACCGG
 521 TGACGGTGTCTGGAAGTCAAGGCGCCCTGACCAGCGGCGT
 561 GCACACCTTCCCGGCTGTCCTACAGTCCTCAGGACTCTAC
 601 TCCCTCAGCAGCGTGGTGACCGTGCCCTCCAGCAGCTTGG
 641 GCACCCAGACCTACATCTGCAACGTGAATCACAAGCCCAG
 681 CAACACCAAGGTGGACAAGAGAGTTGAGCCCAAATCTTGT
 721 GACAAAACCTCACACATGCCACCGTGCCAGCACCTGAAC
 761 TCCTGGGGGGACCGTCAGTCTTCCTCTTCCCCCCTAAACC
 801 CAAGGACACCCTCATGATCTCCCGGACCCCTGAGGTCACA
 841 TGCGTGGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCA
 881 AGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGC
 921 CAAGACAAAGCCGCGGGAGGAGCAGTACAACAGCACGTAC
 961 CGTGTGGTCAGCGTCCTCACCGTCCTGCACCAGGACTGGC
 1001 TGAATGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGC
 1041 CCTCCCAGCCTCCATCGAGAAAACCATCTCCAAAGCCAAA
 1081 GGGCAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCAT
 1121 CCCGGGAGGAGATGACCAAGAACCAGGTCAGCCTGACCTG
 1161 CCTGGTCAAAGGCTTCTATCCCAGCGACATCGCCGTGGAG
 1201 TGGGAGAGCAATGGGCAGCCGGAGAACAACACTACAAGACCA
 1241 CGCCTCCCGTGCTGGACTCCGACGGCTCCTTCTTCTCTA
 1281 TAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCAGGGG
 1321 AACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACA

FIG. 19A

1361 ACCACTACACGCAGAAGAGCCTCTCCCTGTCTCCGGGTAA
1401 GCTTGGCGGAGGCTCACAGGTGCAGCTGGTGCAGAGCGGT
1441 AGCGAACTGAAAAAACCGGGTGCGAGCGTTAAGATCAGCT
1481 GCAAAGCGAGCGGTTATACCTTCACCGATTACGGTATGAA
1521 CTGGGTAAACAGGCGCCGGGTCAAGGTCTGAAATGGATG
1561 GGTTGGATCAACACCTACACCGGTGAAAGCACCTACGTTG
1601 ACGATTTCAAAGGTCGTTTTCGTTTTTCAGCCTGGATAACAG
1641 CGTTAGCGCGGCCTACCTGCAGATCAGCTCTCTGAAAGCG
1681 GAAGACACCGCGACCTACTTCTGCGCGCGTTCGCGGTTTCT
1721 ACGCGATGGATTACTGGGGCCAAGGGACCACGGTCACCGT
1761 CTCCTCAGGTGGAGGCGGTTTCAGGCGGAGGTGGCTCTGGC
1801 GGTGGCGGATCGGACATCGTACTGACCCAGAGCCCGGCGA
1841 CCATGAGCGCGAGCCCGGGTGAACGTGTTACCCTGACCTG
1881 CAGCGCGAGCTCTAGCATCAGCTATATGTTCTGGTATCAT
1921 CAGCGTCCGGGTGAGAGCCCGCGTCTGTTGATCTATGATA
1961 CCAGCAACCTGGCGAGCGGTGTTCCGGCGCGTTCAGCGG
2001 TAGCGGTAGCGGTACCAGCTATAGCCTGACCATCAGCCGT
2041 ATGGAACCGGAAGATTTTCGCGACCTATTTCTGCCATCAGA
2081 GCTCTAGCTATCCGTTACCTTCGGTCAGGGTACCAAAT
2121 CGAGATCAAACGG

FIG. 19B

5 10 15 20
 | | | |
 1 M D F Q V Q I F S F L L I S A S V I L S
 21 Q V Q L V Q S G S E L K K P G A S V K I
 41 S C K A S G Y T F T D Y G M N W V K Q A
 61 P G Q G L K W M G W I N T Y T G E S T Y
 81 V D D F K G R F V F S L D T S V S A A Y
 101 L Q I S S L K A E D T A T Y F C A R R G
 121 F Y A M D Y W G Q G T T V T V S S A S T
 141 K G P S V F P L A P S S K S T S G G T A
 161 A L G C L V K D Y F P E P V T V S W N S
 181 G A L T S G V H T F P A V L Q S S G L Y
 201 S L S S V V T V P S S S L G T Q T Y I C
 221 N V N H K P S N T K V D K R V E P K S C
 241 D K T H T C P P C P A P E L L G G P S V
 261 F L F P P K P K D T L M I S R T P E V T
 281 C V V V D V S H E D P E V K F N W Y V D
 301 G V E V H N A K T K P R E E Q Y N S T Y
 321 R V V S V L T V L H Q D W L N G K E Y K
 341 C K V S N K A L P A S I E K T I S K A K
 361 G Q P R E P Q V Y T L P P S R E E M T K
 381 N Q V S L T C L V K G F Y P S D I A V E
 401 W E S N G Q P E N N Y K T T P P V L D S
 421 D G S F F L Y S K L T V D K S R W Q Q G
 441 N V F S C S V M H E A L H N H Y T Q K S
 461 L S L S P G K L G G G S Q V Q L V Q S G
 481 S E L K K P G A S V K I S C K A S G Y T
 501 F T D Y G M N W V K Q A P G Q G L K W M
 521 G W I N T Y T G E S T Y V D D F K G R F
 541 V F S L D T S V S A A Y L Q I S S L K A
 561 E D T A T Y F C A R R G F Y A M D Y W G
 581 Q G T T V T V S S G G G G S G G G S G

FIG. 20A

601 G G G S D I V L T Q S P A T M S A S P G
621 E R V T L T C S A S S S I S Y M F W Y H
641 Q R P G Q S P R L L I Y D T S N L A S G
661 V P A R F S G S G S G T S Y S L T I S R
681 M E P E D F A T Y F C H Q S S S Y P F T
701 F G Q G T K L E I K R

FIG. 20B

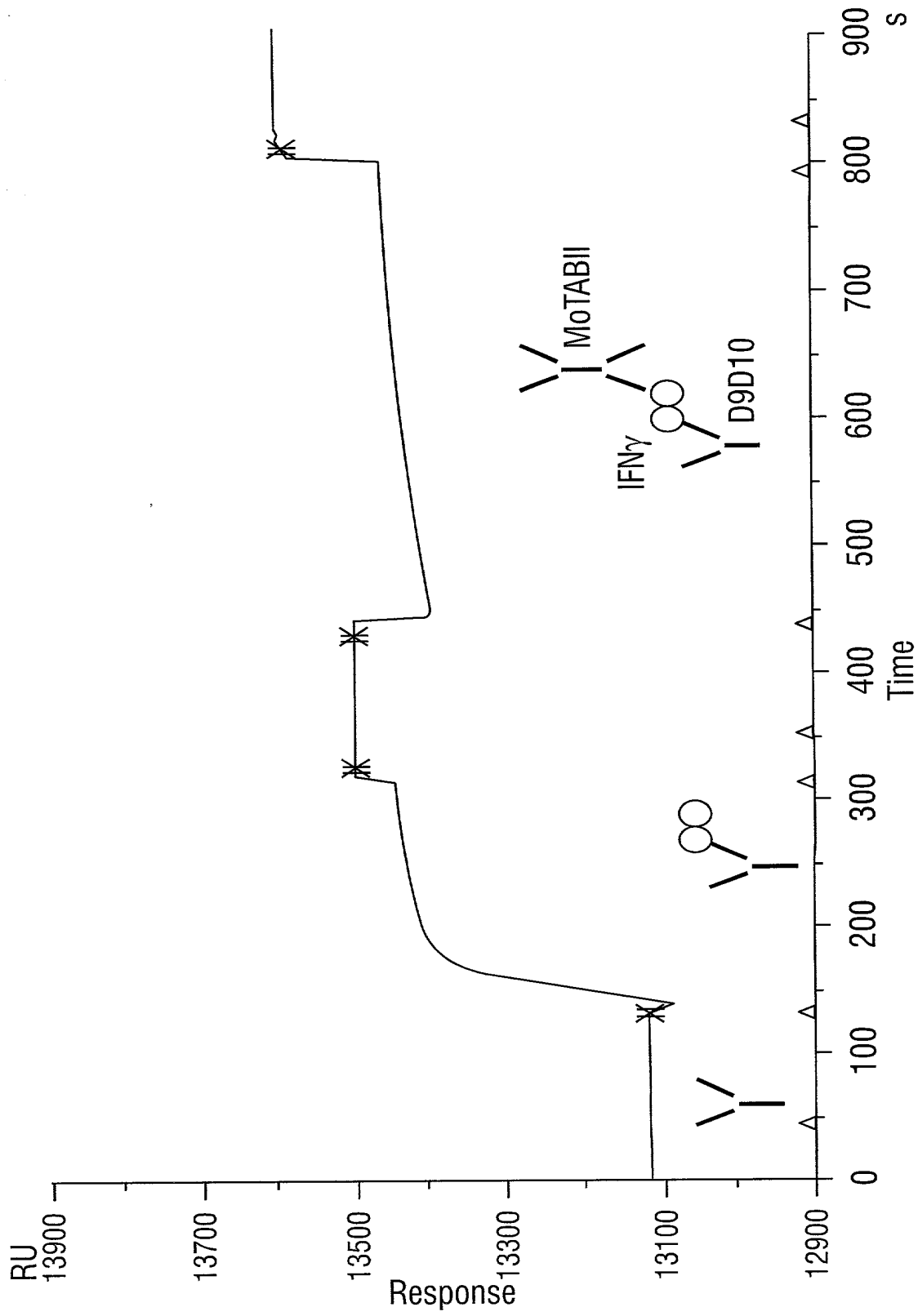


FIG. 21

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1 QVQLVQSGSELKKPGASVKISCKASGYTFTDYGMNWKQAPGQGLKWMGW
51 INTYTGESTYVDDFKGRFVFSLDTSVSAAYLQISSLKAEDTATYFCARRG
101 FYAMDYWGQGTTVTVSSGGGGSGGGGSDIVLTQSPATMSASPGERVTLTC
151 SASSSISYMFYHQRPGQSPRLLIYDTSNLAGVPARFSGSGSGTSYSLT
201 ISRMEPEDFATYFCHQSSSYPFTEFGQGTKLEIKRHHHHHH

FIG. 22

1 CAGGTGCAGCTGGTGCAGAGCGGTAGCGAACTGAAAAAACCGGGTGCGAG
51 CGTTAAGATCAGCTGCAAAGCGAGCGGTTATACCTTCACCGATTACGGTA
101 TGAAGTGGGTAAACAGGCGCCGGGTCAAGGTCTGAAATGGATGGGTGG
151 ATCAACACCTACACCGGTGAAAGCACCTACGTTGACGATTTCAAAGGTCG
201 TTTCGTTTTTCAGCCTGGATACCAGCGTTAGCGCGGCCTACCTGCAGATCA
251 GCTCTCTGAAAGCGGAAGACACCGCGACCTACTTCTGCGCGCGTTCGCGGT
301 TTCTACGCGATGGATTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
351 AGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATCGTACTGACCCAGA
401 GCCCGGCGACCATGAGCGCGAGCCCGGGTGAACGTGTTACCCTGACCTGC
451 AGCGCGAGCTCTAGCATCAGCTATATGTTCTGGTATCATCAGCGTCCGGG
501 TCAGAGCCCGCGTCTGTTGATCTATGATAACCAGCAACCTGGCGAGCGGTG
551 TTCCGGCGCGTTCAGCGGTAGCGGTAGCGGTACCAGCTATAGCCTGACC
601 ATCAGCCGTATGGAACCGGAAGATTTTCGCGACCTATTTCTGCCATCAGAG
651 CTCTAGCTATCCGTTACCTTCGGTCAGGGTACCAAACCTCGAGATCAAAC
701 GG

FIG. 23

1 QVQLVQSGSELKKPGASVKISCKASGYTFTDYGMNWKQAPGQGLKWMGW
51 INTYTGESTYVDDFKGRFVFSLDTSVSAAYLQISSLKAEDTATYFCARRG
101 FYAMDYWGQGTTVTVSSGGGGSDIVLTQSPATMSASPGERVTLTCSASSS
151 ISYMFYHQRPGQSPRLLIYDTSNLAGVPARFSGSGSGTSYSLTISRME
201 PEDFATYFCHQSSSYPFTEFGQGTKLEIKRHHHHHH

FIG. 24

1 CAGGTGCAGCTGGTGCAGAGCGGTAGCGAACTGAAAAAACCGGGTGCGAG
51 CGTTAAGATCAGCTGCAAAGCGAGCGGTTATACCTTCACCGATTACGGTA
101 TGAAGTGGGTTAAACAGGCGCCGGGTCAAGGTCTGAAATGGATGGGTTGG
151 ATCAACACCTACACCGGTGAAAGCACCTACGTTGACGATTTCAAAGGTCG
201 TTTCGTTTTTCAGCCTGGATAACCAGCGTTAGCGCGGCCTACCTGCAGATCA
251 GCTCTCTGAAAGCGGAAGACACCGCGACCTACTTCTGCGCGCGTCGCGGT
301 TTCTACGCGATGGATTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
351 AGGCGGTGGCGGATCGGACATCGTACTGACCCAGAGCCCGGCGACCATGA
401 GCGCGAGCCCGGGTGAACGTGTTACCCTGACCTGCAGCGCGAGCTCTAGC
451 ATCAGCTATATGTTCTGGTATCATCAGCGTCCGGGTGAGAGCCCGCGTCT
501 GTTGATCTATGATAACCAGCAACCTGGCGAGCGGTGTTCCGGCGCGTTC
551 GCGGTAGCGGTAGCGGTACCAGCTATAGCCTGACCATCAGCCGTATGGAA
601 CCGGAAGATTTTCGCGACCTATTTCTGCCATCAGAGCTCTAGCTATCCGTT
651 CACCTTCGGTCAGGGTACCAAACCTCGAGATCAAACGG

FIG. 25

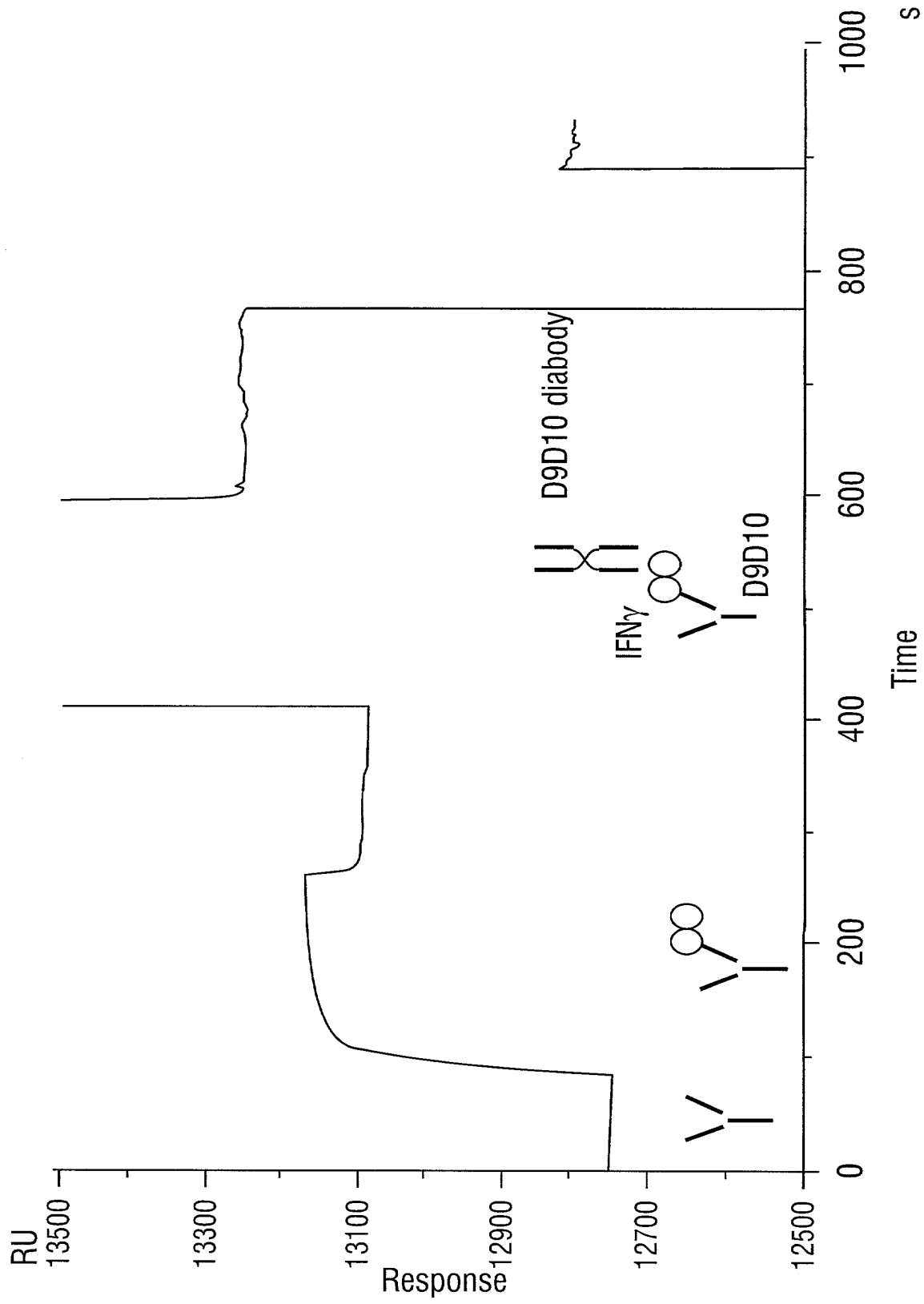


FIG. 26

1 CAGGTGCAGCTGGTGCAGAGCGGTAGCGAACTGAAAAAACCGGGTGCGAG
51 CGTTAAGATCAGCTGCAAAGCGAGCGGTTATACCTTCACCGATTACGGTA
101 TGAAGTGGGTTAAACAGGCGCCGGGTCAAGGTCTGAAATGGATGGGTTGG
151 ATCAACACCTACACCGGTGAAAGCACCTACGTTGACGATTTCAAAGGTCG
201 TTTCGTTTTTCAGCCTGGATACCAGCGTTAGCGCGGCCTACCTGCAGATCA
251 GCTCTCTGAAAGCGGAAGACACCGCGACCTACTTCTGCGCGCGTCGCGGT
301 TTCTACGCGATGGATTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
351 AGACATCGTACTGACCCAGAGCCCGGCGACCATGAGCGCGAGCCCGGGTG
401 AACGTGTTACCCTGACCTGCAGCGCGAGCTCTAGCATCAGCTATATGTTC
451 TGGTATCATCAGCGTCCGGGTCAGAGCCCGCGTCTGTTGATCTATGATAC
501 CAGCAACCTGGCGAGCGGTGTTCCGGCGCGTTCAGCGGTAGCGGTAGCG
551 GTACCAGCTATAGCCTGACCATCAGCCGTATGGAACCGGAAGATTTTCGCG
601 ACCTATTTCTGCCATCAGAGCTCTAGCTATCCGTTACCTTCGGTCAGGG
651 TACCAAACCTCGAGATCAAACGG

FIG. 27

1 QVQLVQSGSELKKPGASVKISCKASGYTFTDYGMNWVKQAPGQGLKWMGW
51 INTYTGESTYVDDFKGRFVFSLDTSVSAAYLQISSLKAEDTATYFCARRG
101 FYAMDYWGQGTTVTVSSDIVLTQSPATMSASPGERVTLTCSASSSISYMF
151 WYHQRPGQSPRLLIYDTSNLAGVPARFSGSGSGTSYSLTISRMEPEDFA
201 TYFCHQSSSYPTFTFGQGTKLEIKRHHHHHH

FIG. 28

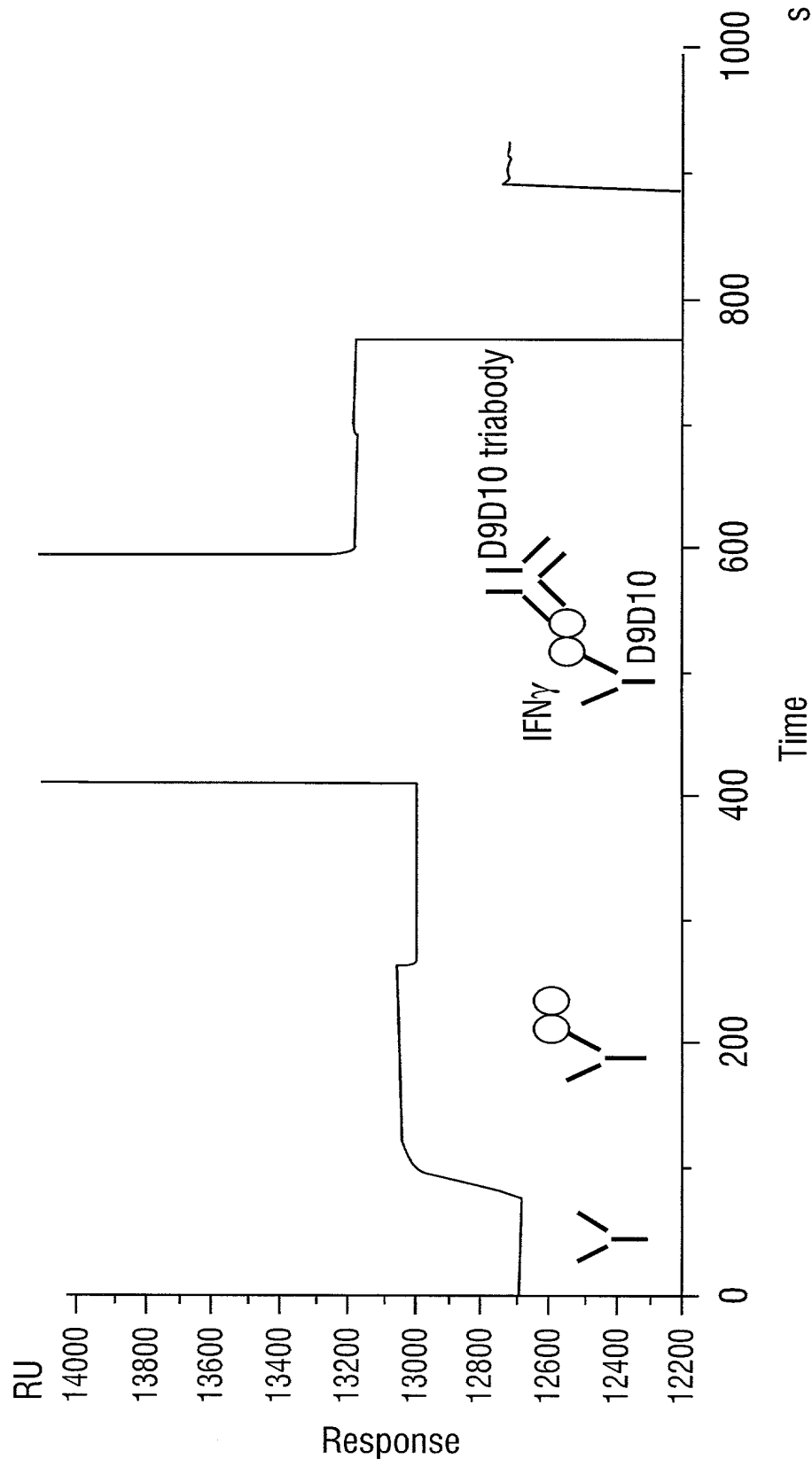


FIG. 29

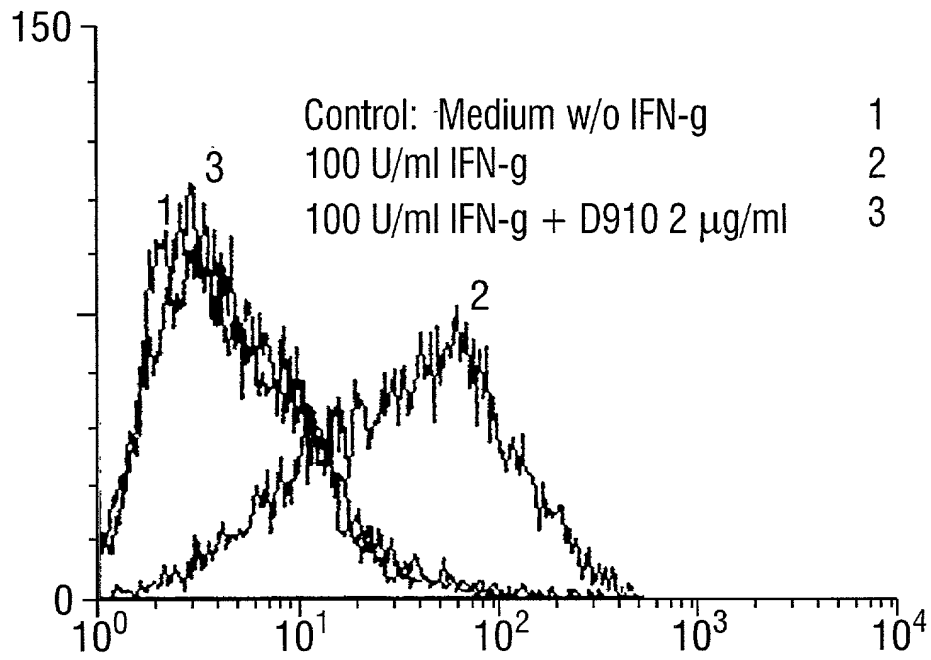


FIG. 30A

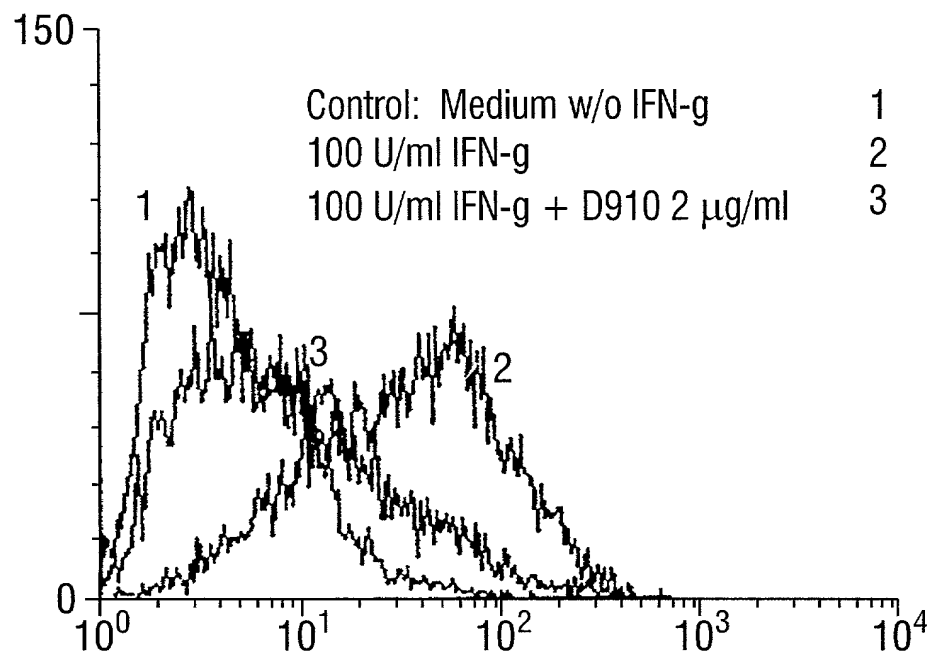
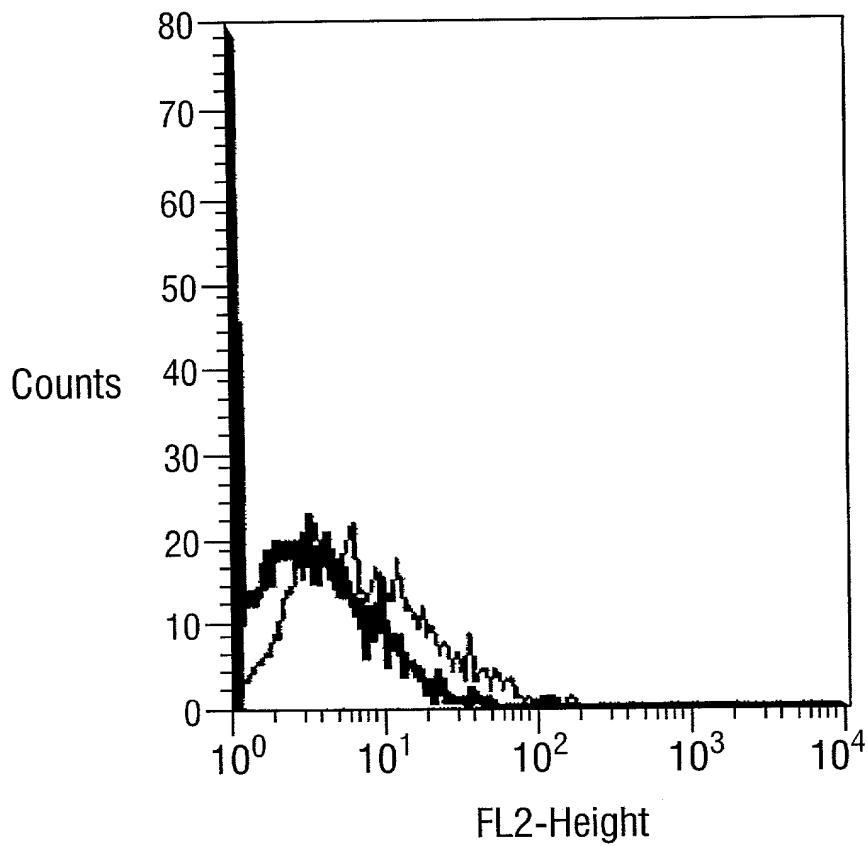
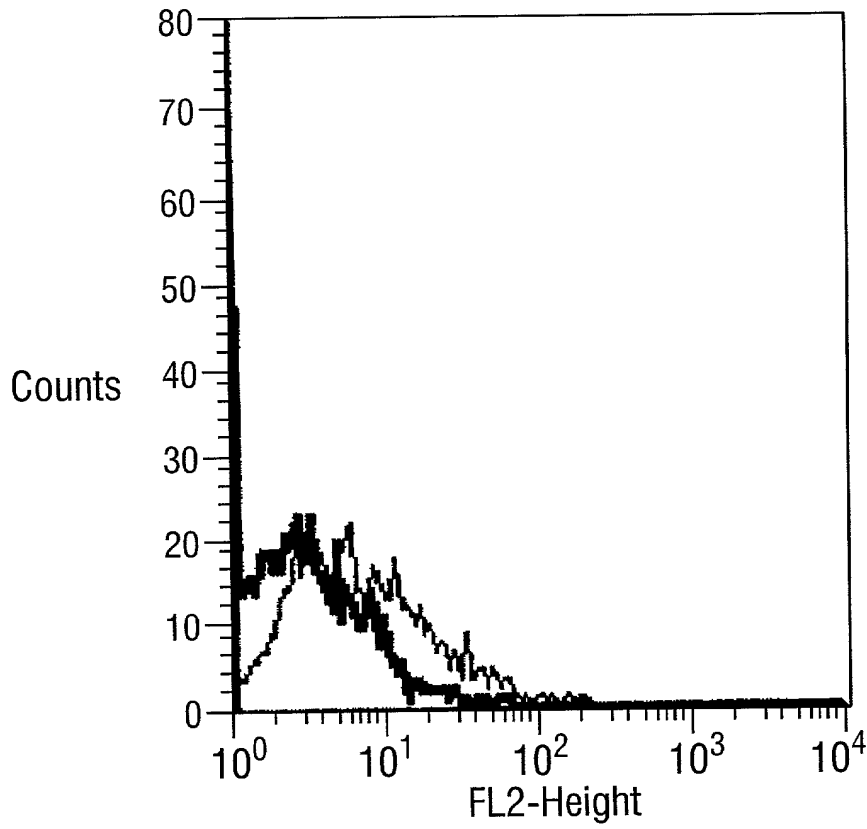


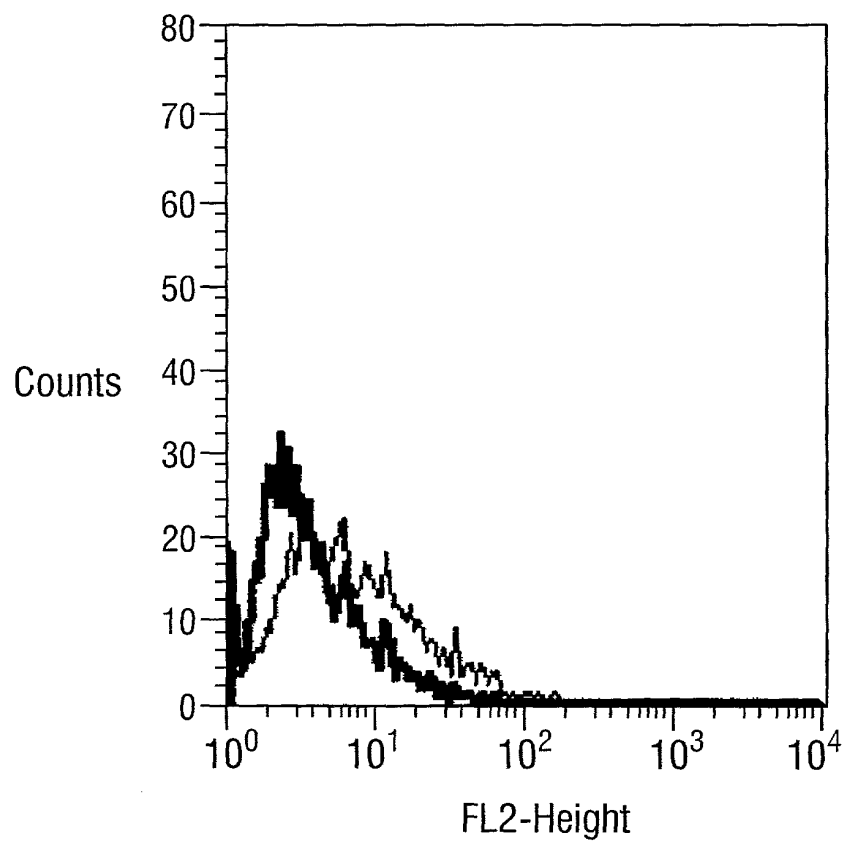
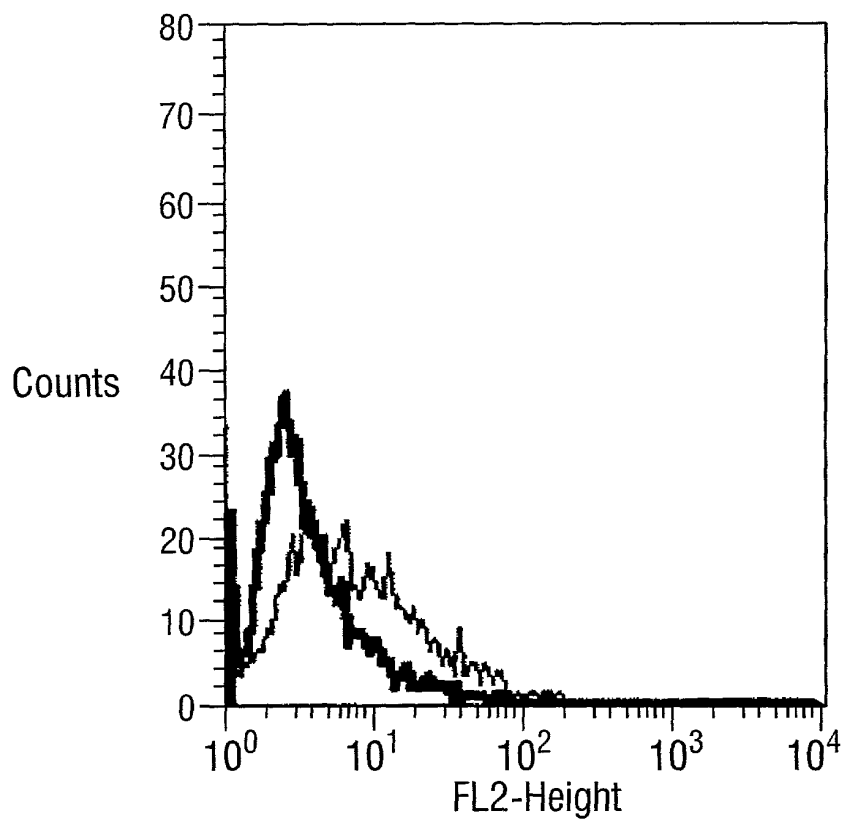
FIG. 30B

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First experiment

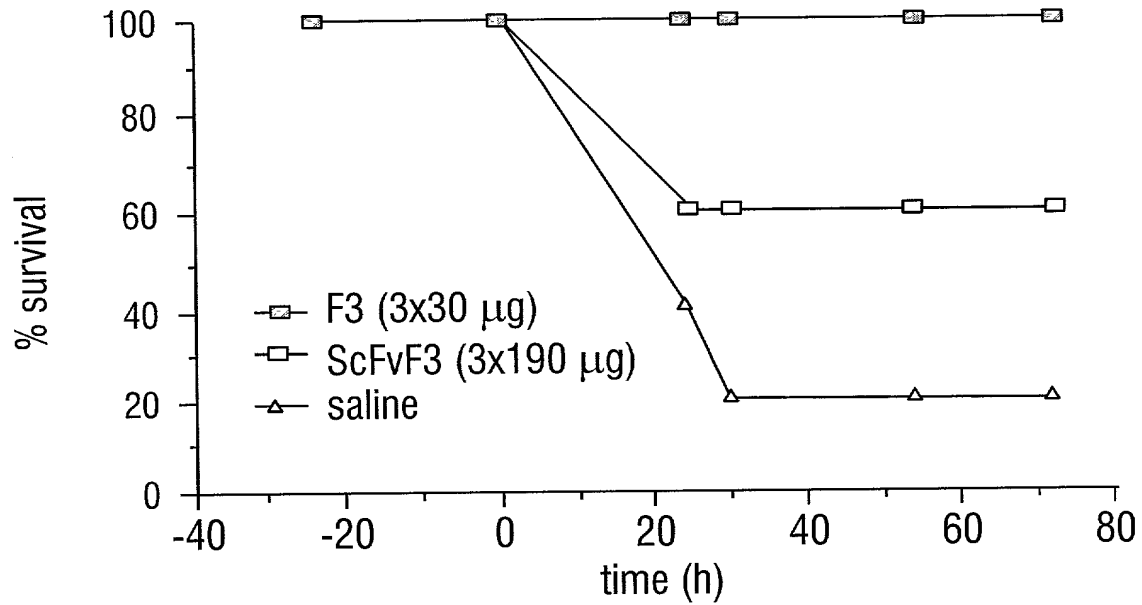


FIG. 32A

Second experiment

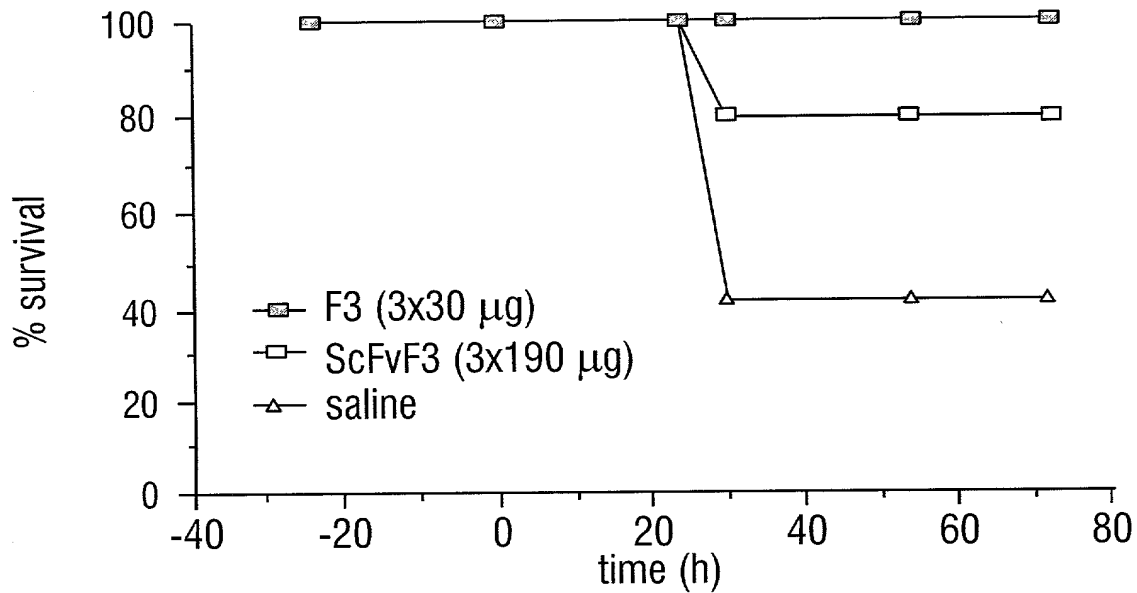


FIG. 32B

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First experiment

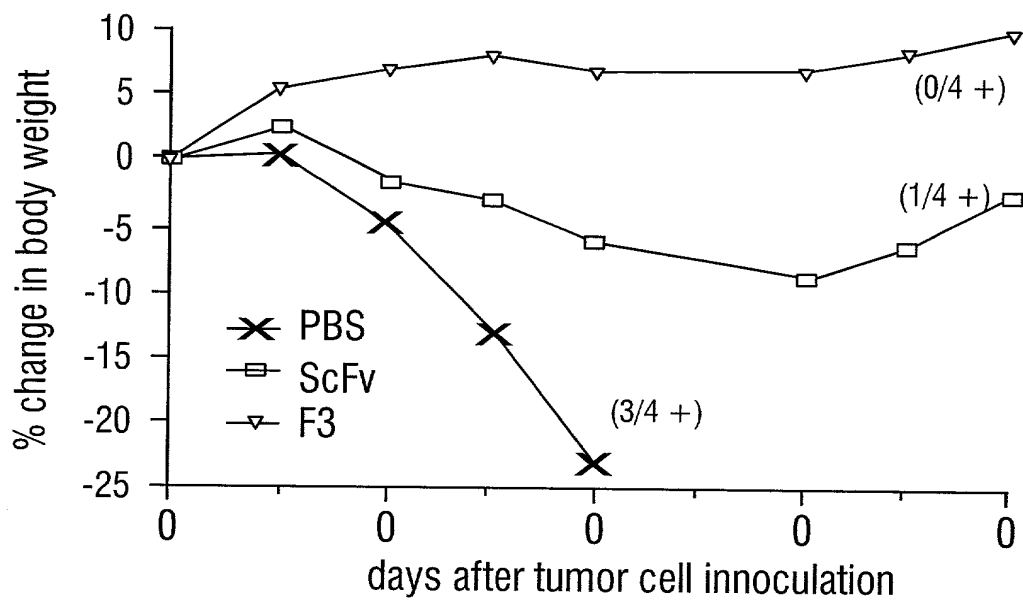


FIG. 33A

Second experiment

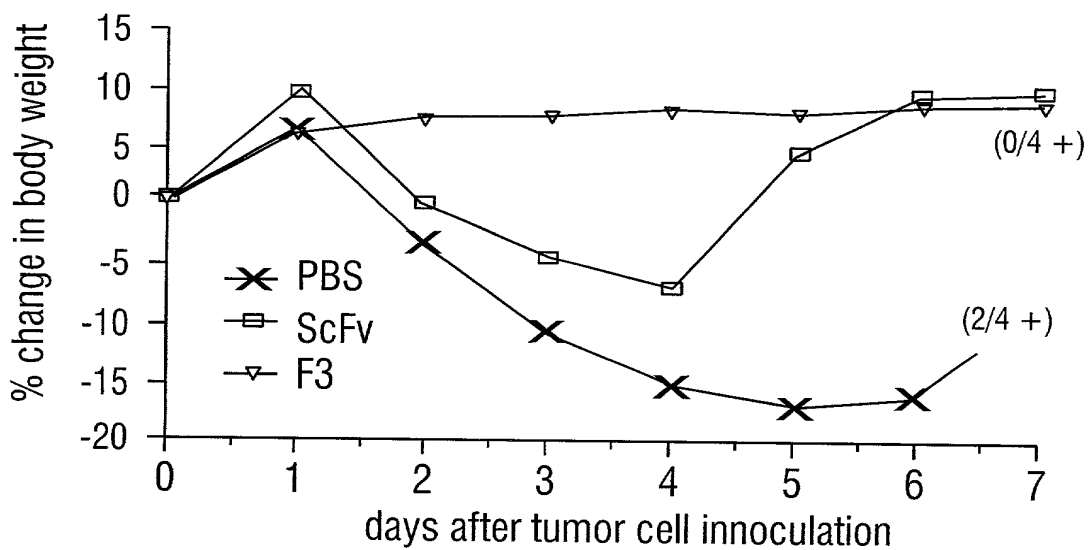


FIG. 33B